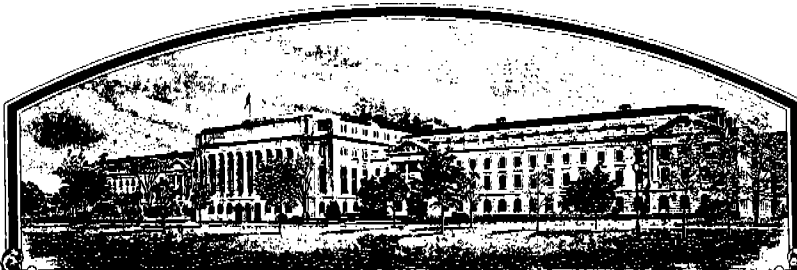


No.



7700007

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'A1564'



In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington
this 18th day of March in
the year of our Lord one thousand nine
hundred and seventy-seven

Attest.

[Signature]
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

[Signature]
Acting Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

| | | | |
|---|---|---|---|
| 1a. TEMPORARY DESIGNATION OF VARIETY 1564 | 1b. VARIETY NAME A 1564 | FOR OFFICIAL USE ONLY PV NUMBER 7700007 | |
| 2. KIND NAME Soybean | 3. GENUS AND SPECIES NAME Glycine max | FILING DATE 10-29-76 | TIME 2:00 P.M. |
| 4. FAMILY NAME (BOTANICAL) Leguminosae | 5. DATE OF DETERMINATION 1973 | FEE RECEIVED \$ 250.00 \$ 250.00 \$ 250.00 | DATE _____ _____ _____ |
| 6. NAME OF APPLICANT(S) Asgrow Seed Company | 7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Kalamazoo, Michigan 49001 | 8. TELEPHONE AREA CODE AND NUMBER 616-385-6605 | |
| 9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation | | 10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Delaware | 11. DATE OF INCORPORATION March 22, 1968 |

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

John A. Batcha
Asgrow Seed Company
7000 Portage Rd.
Unit 9630-190-1
Kalamazoo, MI 49001

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☐ 13D. Exhibit D, Additional Description of the Variety.

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed?
(See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO

| | |
|--|--|
| 14B. Does the applicant(s) specify that this variety be limited as to number of generations? <input type="checkbox"/> YES <input type="checkbox"/> NO | 14C. If "Yes," to 14B, how many generations of production beyond breeder seed? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED |
|--|--|

15. Does the applicant(s) agree to the publication of his/her (their) name(s) and address in the Official Journal?

☒ YES ☐ NO

16. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

October 18, 1976
(DATE)John A. Batcha
(SIGNATURE OF APPLICANT)

00001

(DATE)

(SIGNATURE OF APPLICANT)

Asgrow Seed Company

Soybean ~~1564~~

A R/S

7700007

EXHIBIT A

Origin and Breeding History of the Variety

- 1969 - Original Cross Made at Ames, Iowa
Hark x C1453
(C1453 is an Indiana Breeding Line)
- 1970 - 7 F₁ plants grown in Iowa.
- 1970-71 - F₂ and F₃ generations grown in Puerto Rico maintained in bulk populations.
- 1972 - F₄ Bulk population grown in Iowa.
- Single plant selections were threshed individually for F₅ progeny rows.
- 1973 - From F₅ progeny rows grown in Iowa, line 0075-71-11629-50202 was selected. All plants within this progeny row were uniform for height, flower, pod, and pubescence color and maturity. Line given experimental designation C73-50202.
- 1974 - F₆ line C73-50202 was grown in Preliminary test at Ames, Iowa. Tests consisted of 2 row plots, 16' long, replicated twice. C73-50202 was advanced to Strain Test because of its high yield and other desirable agronomic traits.
- 1975 - F₇ line C73-50202 grown in Strain Tests at four locations in Iowa, Minnesota and Wisconsin. Also submitted to state soybean tests in South Dakota as XP1064. In addition, 200 plant rows were grown at Ames, Iowa, and carefully evaluated for genetic segregation. No segregation was noted, all 200 5' plant rows were uniform. Breeder seed quantities of 12 bushels were produced at Ames and 40 bushels of Basic seed were produced at Delray Beach, Florida, during the winter.

C73-50202 was assigned the XP number of 1564 because of its intermediate Group I maturity rank.
- 1976 - Basic and Foundation seed produced at Clarion, Iowa. All seed fields were free of offtypes and very uniform. ~~XP~~1564 was entered into state soybean yield tests in Iowa, Minnesota, South Dakota, and Wisconsin.

October 18, 1976

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EXHIBIT B

Novelty Statement

^A
~~XP~~1564 is a pure-line soybean cultivar in the same maturity class (Group I) as such soybean cultivars as Hodgson, Chippewa 64, and Hark. It resembles Hark (one of its parents) and Hodgson more than any other cultivars. However, it is clearly distinguished from Hark and Hodgson in the following traits:

1. ^A ~~XP~~1564 has the gene, Rps, for resistance to Race 1 of Phytophthora root rot, whereas Hark and Hodgson does not.

Asgrow Test -

Using pierced hypocotyl technique and inoculum supplied by Dr. Hideo Tachibana of Iowa State University:

Dead plants out of 50 inoculated

| | |
|------------------------------------|----|
| ^A XP 1564 | 0 |
| Hark | 46 |
| Hodgson | 47 |

2. ^A ~~XP~~1564 matures 4 days earlier than Hark on the average.

1975 Tests:

| <u>Location:</u> | <u>Date of Maturity^a</u> | | <u>Difference in Days</u> |
|--------------------|-------------------------------------|------|---------------------------|
| | ^A XP 1564 | Hark | |
| Ames, Iowa | 9-12 | 9-17 | 5 |
| Britt, Iowa | 9-11 | 9-14 | 3 |
| Blue Earth, Minn. | 9-14 | 9-18 | 4 |
| Sun Prairie, Wisc. | 9-17 | 9-21 | 4 |

^a Average of 4 replications per location. x = 4

^A
~~XP~~1564 and Hodgson are of similar maturity LSD.05 = 2

3. ^A ~~XP~~1564 has a yellow hilum whereas Hodgson has a buff hilum.

October 18, 1976

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (GLYCINE MAX)A
SP1564

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Asgrow Seed Company

ADDRESS (Street and No., or R.F.D. No.; City, State, and ZIP Code)

Kalamazoo, Michigan 49001

FOR OFFICIAL USE ONLY

PVPO NUMBER

7700007

VARIETY NAME OR TEMPORARY
DESIGNATIONA
SP1564 RFS

Place the appropriate number that describes the varietal character of this variety in the boxes below.

1. SEED SHAPE:

☐ 1 = SPHERICAL ☐ 2 = SPHERICAL
FLATTENED ☐ 3 = ELONGATE ☐ 4 = OTHER (Specify)

2. SEED COAT COLOR:

☐ 1 = YELLOW ☐ 2 = GREEN ☐ 3 = BROWN ☐ 4 = BLACK
☐ 5 = OTHER (Specify)

SHADE:

☐ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

3. SEED COAT LUSTER:

☐ 1 = DULL ☐ 2 = SHINY

4. SEED SIZE

☐ ☐ ☐ GRAMS PER 100 SEEDS

5. HILUM COLOR:

☐ 1 = BUFF ☐ 2 = YELLOW ☐ 3 = BROWN ☐ 4 = GRAY ☐ 5 = IMPERFECT
BLACK
☐ 6 = BLACK ☐ 7 = OTHER (Specify)

SHADE:

☐ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

6. COTYLEDON COLOR:

☐ 1 = YELLOW ☐ 2 = GREEN

7. LEAFLET SIZE (See Reverse):

☐ 1 = SMALL ☐ 2 = MEDIUM ☐ 3 = LARGE

8. LEAFLET SHAPE:

☐ 1 = OVATE ☐ 2 = OBLONG ☐ 3 = LANCEOLATE ☐ 4 = ELLIPTICAL ☐ 5 = OTHER (Specify)

9. LEAF COLOR (See reverse):

☐ 1 = LIGHT GREEN ☐ 2 = MEDIUM GREEN ☐ 3 = DARK GREEN

10. FLOWER COLOR:

☐ 1 = WHITE ☐ 2 = PURPLE
☐ 3 = OTHER (Specify)

11. POD COLOR:

☐ 1 = TAN ☐ 2 = BROWN ☐ 3 = BLACK

12. POD SET:

☐ 1 = SCATTERED ☐ 2 = CONCENTRATED

13. PLANT PUBESCENCE COLOR:

☐ 1 = GRAY ☐ 2 = BROWN ☐ 3 = OTHER (Specify)

SHADE:

☐ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

14. PLANT TYPES (See Reverse):

☐ 1 = SLENDER ☐ 2 = BUSHY ☐ 3 = INTERMEDIATE

15. PLANT HABIT:

☐ 1 = DETERMINATE ☐ 2 = INDETERMINATE
☐ 3 = OTHER (Specify)

16. HYPOCOTYL COLOR:

☐ 1 = GREEN ☐ 2 = PURPLE

17. SEED PROTEIN:

☐ 1 = A ☐ 2 = B

18. NUMBER OF DAYS TO FLOWERING

(Place a zero in first box (e.g. ☐ ☐ ☐) when
days are 9 or less.)Planted 5/10 ☐ ☐ ☐

19. MATURITY GROUP:

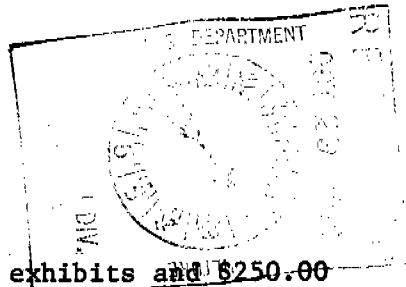
☐ 1 = 00 ☐ 2 = 0 ☐ 3 = I ☐ 4 = II ☐ 5 = III
☐ 6 = IV ☐ 7 = V ☐ 8 = VI ☐ 9 = VII ☐ 10 = VIII20. SIZE OF 10 DAY OLD SEEDLING GROWN UNDER CONSTANT LIGHT (Growth Chamber) AT 25° C. (Place a zero in first box
(e.g. ☐ ☐ ☐) when size is 9 mm. or less.)☐ ☐ ☐ MM. LENGTH
OF SEEDLING☐ ☐ ☐ MM. LENGTH
OF COTYLEDON☐ ☐ ☐ MM. WIDTH
OF COTYLEDON

21. DISEASE: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ BACTERIAL
PUSTULE☐ SOYBEAN
CYST☐ DOWNY
MILDEW☐ PURPLE
STAIN☐ POD AND
STEM BLIGHT☐ ROOT
KNOT☐ FROGEYE☐ STEM
CANKER☐ PHYTO-
PHTHORA☐ BROWN
STEM ROT☐ TARGET
SPOT☐ BROWN
SPOT☐ BUD
BLIGHT☐ WILDFIRE☐ RHIZOCTONIA
ROT☐ OTHER (Specify)

00004

INSTRUCTIONS



GENERAL: Send an original copy of the application, exhibits and \$250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, National Agricultural Library, Beltsville, Maryland 20705. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in Section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give (1), the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. (2), the details of subsequent stages of selection and multiplication. (3), the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4), evidence of stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties; (1) identify these varieties and state all differences objectively; (2) Attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form for all characteristics, for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe; such as; plant habit, plant color, disease resistance, etc.
- 14A If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled or published or the certificate has been issued. However, if the applicant specifies "NO", he may change his choice. (See Section 180.15 of the Regulations and Rules of Practice.)

77-7

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

| CHARACTER | NAME OF VARIETY | CHARACTER | NAME OF VARIETY |
|--------------|-----------------|-----------------------|-----------------|
| Plant shape | Hark | Petiole angle | Hark |
| Leaf shape | Hark | Seed size | Hark |
| Leaf color | Hark | Seed shape | Hark |
| Leaf surface | Hark | Seedling pigmentation | Hark |

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY:

| VARIETY | NO. OF DAYS TO MATURITY | LODGING SCORE | PLANT HEIGHT | LEAF SIZE | | CONTENT | | AVERAGE NO. OF PODS PER PLANT | IODINE NO. |
|---------------------------------|-------------------------|---------------|--------------|-----------|---------|---------|-------|-------------------------------|------------|
| | | | | Width | Length | Protein | Oil | | |
| Submitted | 118 | 1.9 | 36 | MM 6 | MM 9 | 41.0 | 21.7% | 84 | -- |
| Name of similar variety Hark | 122 | 2.1 | 36 | 5 | 9 | 40.6 | 21.9 | 81 | -- |

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for completing this form:

1. Scott, Walter O. and Samuel R. Aldrich, 1970, Modern Soybean Production, The Farmer Quarterly.
2. Norman, A. G., 1963, The Soybean: Genetics, Breeding, Physiology, Nutrition, Management.
3. McKie, J. W., and K. L. Anderson, 1970, The Soybean Book.

LEAF COLOR: Nickerson's or any recognized color fan may be used to determine the leaf color of the described variety. The following Soybean varieties may be used as a guide to identify the colors listed on the form.

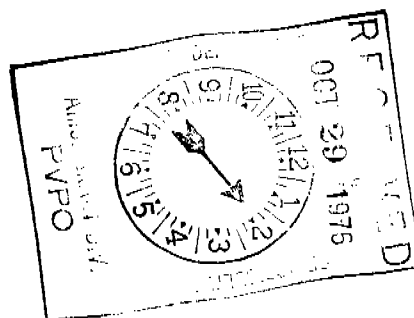
| COLOR | VARIETY |
|--------------|----------|
| Light Green | "Ada" |
| Medium Green | "Wilkin" |
| Dark Green | "Swift" |

LEAF SIZE: The following varieties may be used as a guide to identify the relative size leaves.

| SIZE | VARIETY |
|--------|---------|
| Small | "Amsoy" |
| Medium | "Bonus" |
| Large | "Anoka" |

PLANT TYPE: The following varieties may be used as a guide to identify the plant type.

| TYPE | VARIETY |
|--------------|------------|
| Slender | "Vansoy" |
| Intermediate | "Wirth" |
| Bushy | "Adelphia" |



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